

Claim Amendment Summary

Claims pending

- At time of the Action: Claims 1-21 and 26-35.
- After this Response: Claims 1-21, 26-32 and 34-35.

Canceled or Withdrawn claims: 33.

Amended claims: 1, 10, 15, 26, 32, and 35.

New claims: none.

The listing of claims below will replace prior versions of claims in the application:

1. **(CURRENTLY AMENDED)** An apparatus comprising:
a first device;
a first connector coupled to the first device;
a second connector coupled to the first connector through a first plurality of conductors, wherein alternating pairs of conductors are reversed such that at least one pair of conductors is reversed at a crossover position located substantially closer to the first connector than the second connector; and
a second device coupled to the second connector through a second plurality of conductors.

2. **(ORIGINAL)** An apparatus as recited in claim 1 wherein the first device includes a plurality of differential drivers.

3. **(ORIGINAL)** An apparatus as recited in claim 1 wherein the second device includes a plurality of differential receivers.

1
2 4. **(ORIGINAL)** An apparatus as recited in claim 1 wherein the first
3 device is an integrated circuit.

4
5 5. **(ORIGINAL)** An apparatus as recited in claim 1 wherein the first
6 device is an integrated circuit disposed on a substrate, wherein the substrate is
7 electrically coupled to the integrated circuit and the first connector.

8
9 6. **(ORIGINAL)** An apparatus as recited in claim 1 wherein the second
10 device is an integrated circuit.

11
12 7. **(ORIGINAL)** An apparatus as recited in claim 1 wherein the first
13 device has an inductive coupling coefficient substantially the same as the
14 inductive coupling coefficient of the second device.

15
16 8. **(ORIGINAL)** An apparatus as recited in claim 1 wherein the
17 alternating pairs of conductors are reversed once between the first connector and
18 the second connector.

19
20 9. **(ORIGINAL)** An apparatus as recited in claim 1 wherein alternating
21 pairs of conductors in the second plurality of conductors are reversed.

22
23 10. **(CURRENTLY AMENDED)** An apparatus comprising:
24 a first integrated circuit including a plurality of differential drivers;
25 a first connector coupled to the first integrated circuit;

1 a second connector coupled to the first connector through a plurality of
2 electrical conductors, wherein alternating pairs of the electrical conductors are
3 reversed such that at least one pair of conductors is reversed at a crossover
4 position located substantially closer to the first connector than the second
5 connector; and

6 a second integrated circuit coupled to the second connector, wherein the
7 second integrated circuit includes a plurality of differential receivers.

8
9 11. (ORIGINAL) An apparatus as recited in claim 10 further
10 comprising a second plurality of electrical conductors coupled between the second
11 connector and the second integrated circuit, wherein alternating pairs of the second
12 plurality of electrical conductors are reversed.

13
14 12. (ORIGINAL) An apparatus as recited in claim 10 further
15 comprising a second plurality of electrical conductors coupled between the second
16 connector and the second integrated circuit, wherein each pair of conductors
17 includes an inverted conductor and a non-inverted conductor, each inverted
18 conductor coupled to a non-inverted input of one of the differential receivers, and
19 each non-inverted conductor coupled to an inverted input of one of the differential
20 receivers.

21
22 13. (ORIGINAL) An apparatus as recited in claim 10 wherein the first
23 integrated circuit has an inductive coupling coefficient substantially the same as
24 the inductive coupling coefficient of the second integrated circuit.
25

1 14. **(ORIGINAL)** An apparatus as recited in claim 10 wherein the
2 alternating pairs of electrical conductors are reversed once between the first
3 connector and the second connector.
4

5 15. **(CURRENTLY AMENDED)** An apparatus comprising:
6 a printed circuit board;
7 a plurality of connectors disposed on the printed circuit board;
8 a first integrated circuit disposed on a first substrate, wherein the first
9 substrate is configured to be coupled to one of the plurality of connectors;
10 a second integrated circuit disposed on a second substrate, wherein the
11 second substrate is configured to be coupled to one of the plurality of connectors;
12 and
13 a first plurality of electrical conductors coupled to the plurality of
14 connectors, wherein alternating pairs of conductors between adjacent connectors
15 are reversed such that at least one pair of conductors is reversed at a crossover
16 position located substantially closer to one of the plurality of connectors than
17 another of the plurality of connectors.
18

19 16. **(ORIGINAL)** An apparatus as recited in claim 15 wherein the
20 printed circuit board is a backplane.
21

22 17. **(ORIGINAL)** An apparatus as recited in claim 15 further
23 comprising a second plurality of conductors coupled between the first integrated
24 circuit and one of the plurality of connectors, wherein alternating pairs of
25 conductors have reversed polarity.

1
2 18. **(ORIGINAL)** An apparatus as recited in claim 15 wherein the first
3 substrate is a printed circuit board.

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5 19. **(ORIGINAL)** An apparatus as recited in claim 15 wherein the first
6 substrate is a memory module.

7
8 20. **(ORIGINAL)** An apparatus as recited in claim 15 wherein the first
9 integrated circuit is a memory device.

10
11 21. **(ORIGINAL)** An apparatus as recited in claim 15 wherein the first
12 integrated circuit has an inductive coupling substantially the same as the inductive
13 coupling of the second integrated circuit.

14
15 22 - 25. **(CANCELED)**

16
17 26. **(CURRENTLY AMENDED)** A method comprising:
18 generating a plurality of differential signals;
19 transmitting the plurality of differential signals through a first connector
20 and a second connector to a plurality of differential receivers;
21 reversing the polarity of alternating differential signals at a crossover
22 position located substantially closer to the first connector than the second
23 connector; and
24 reversing the polarity of alternating differential signals between the second
25 connector and the plurality of differential receivers.

1
2 27. **(ORIGINAL)** A method as recited in claim 26 wherein the first
3 connector generated inductive coupling noise as the differential signals are
4 transmitted through the first connector.

5
6 28. **(ORIGINAL)** A method as recited in claim 26 wherein the second
7 connector generated inductive coupling noise opposite the noise generated by the
8 first connector as the differential signals are transmitted through the second
9 connector.

10
11 29. **(ORIGINAL)** A method as recited in claim 26 further including
12 decoding the plurality of differential signals.

13
14 30. **(ORIGINAL)** A method as recited in claim 26 wherein a transmitter
15 package transmits the plurality of differential signals and a receiver package
16 receives the plurality of differential signals.

17
18 31. **(ORIGINAL)** A method as recited in claim 30 further including
19 modifying the transmitter package such that the coupling coefficient of the
20 transmitter package is substantially the same as the receiver package.

21
22 32. **(CURRENTLY AMENDED)** A method comprising:
23 modifying a transmitter package such that the coupling coefficient of the
24 transmitter package is substantially the same as the coupling coefficient of a
25 receiver package;

1 transmitting multiple pairs of differential signals across a plurality of
2 conductors using the transmitter package;

3 reversing polarity of alternating pairs of differential signal conductors such
4 that at least one pair of conductors is reversed at a crossover position located
5 substantially closer to the transmitter package than the receiver package; and

6 receiving the multiple pairs of differential signals using the receiver
7 package.

8
9 33. (CANCELED)

10
11 34. (ORIGINAL) A method as recited in claim 32 further comprising
12 decoding the multiple pairs of differential signals.

13
14 35. (CURRENTLY AMENDED) A method as recited in claim 32
15 wherein the differential signals are transmitted through a pair of connectors on
16 [[a]] the plurality of conductors, wherein alternating pairs of conductors are
17 reversed between the pair of connectors.

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19 36 - 38. (CANCELED)